

Form PTO-1449 U.S. Department of Commerce

(REV. 8-83) Patent and Trademark Office

INFORMATION DISCLOSURE CITATION
(use several sheets if necessary)**EXAMINER'S
COPY**Atty. Docket No.
ENZ-5(D6)(C2)

Serial No. 08/479,997

Applicants: Dean L. Engelhardt et al.

Filed: June 7, 1995

Group: ~~1656~~
1637

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPRO- PRIATE |
|---------------------|-----------------|------|------|-------|--------------|---------------------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS | TRAN- SLATION YES NO |
|-----------------|------|---------|-------|--------------|----------------------------|
| | | | | | |
| | | | | | |
| | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|----------|--|
| as | Pollack, S. E. and Auld, D. S., "Fluorescent Nucleotide Triphosphate Substrates for Snake Venom and Phosphodiesterase," <u>Analytical Biochemistry</u> 127: 81-88 (1982) |
| | Scopes, D. I. C., et al., "Defined Dimensional Changes in Enzyme Cofactors: Fluorescent "Stretched-Out" Analogs of Adenine Nucleotides," <u>Science</u> 195: 296-298 (1977) |
| | Onodera, M. and Yagi, K., "Synthesis of 2-(Dansylamino)Ethyl Triphosphate and its Properties as a Fluorescent Substrate of Heavy Meromyosin-ATPase," <u>Biochimica Et Biophysica</u> 253: 254-265 (1971) |
| | Yarbrough, L. R., "Synthesis and Properties of a New Fluorescent Analog of ATP: Adenosine-5'-Triphospho-γ-1-(5-Sulfonic Acid) Naphthylamidate," <u>Biochemical and Biophysical Research Communications</u> 81(1): 35-41 (1978) |
| as | Silver, M. S. and Fersht, A. R., "Direct Observation of Complexes Formed between recA Protein and a Fluorescent Single-Stranded Deoxyribonucleic Acid Derivative," <u>Biochemistry</u> 21: 6066-6072 (Received April 16, 1982) |
| EXAMINER | DATE CONSIDERED |

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | |
|--|---------------------------------------|-----------------------|
| Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary) | Atty. Docket No. ENZ-5(D6)(C2) | Serial No. 08/479,997 |
| | Applicants: Dean L. Engelhardt et al. | |
| | Filed: June 7, 1995 | Group: 1656 |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPRO- PRIATE |
|---------------------|-----------------|------|------|-------|--------------|---------------------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS | TRAN- SLATION YES NO |
|-----------------|------|---------|-------|--------------|----------------------------|
| | | | | | |
| | | | | | |
| | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|----------|--|
| as | Crane, L. J. and Miller, D. L., "Guanosine Triphosphate and Guanosine Diphosphate as Conformation-Determining Molecules. Differential Interaction of a Fluorescent Probe with the Guanosine Nucleotide Complexes of Bacterial Elongation Factor Tu," <u>Biochemistry</u> 13(5): 933-938 (1974) |
| | Hertz, H. S. and Zachau, H. G., "Kinetic Properties of Phenylalanyl-tRNA and Seryl-tRNA Synthetases for Normal Substrates and Fluorescent Analogs," <u>Eur. Journal of Biochemistry</u> 37: 203-213 (1973) |
| | Wu, F. Y. H. and Wu, C. W., "Fluorescent Affinity Labeling of Initiation Site on Ribonucleic Acid Polymerase of <i>Escherichia coli</i> ," <u>Biochemistry</u> 13(12): 2562-2566 (1974) |
| | McKenzie, R. L., et al., "Fluorescent Conjugates of Natural and Biosynthetic Polynucleotides," <u>Biochimica Et Biophysica ACTA</u> 277: 306-322 (1972) |
| | Tournon, J., "Fluorescence Probing of Nucleic Acids: I. singly and doubly labeled dithymidine phosphate: fluorescence and energy transfer studies," <u>Nucleic Acids Research</u> 2(8): 1261-1273 (1975) |
| as | Erlanger, B. F., et al., "Use of Antibodies to Nucleosides and Nucleotides in Studies of Nucleic Acids in Cells," <u>Methods in Enzymology</u> 60: 302-307 (1975) |
| EXAMINER | DATE CONSIDERED 9/30/02 |

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | |
|--|---------------------------------------|-----------------------|
| Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary) | Atty. Docket No. ENZ-5(D6)(C2) | Serial No. 08/479,997 |
| | Applicants: Dean L. Engelhardt et al. | |
| | Filed: June 7, 1995 | Group: 1656 |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPRO- PRIATE |
|---------------------|-----------------|------|------|-------|--------------|---------------------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS | TRAN- SLATION YES NO |
|-----------------|------|---------|-------|--------------|----------------------------|
| | | | | | |
| | | | | | |
| | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|--------------------|---|
| as | Yarbrough, L. R., et al., "Synthesis and Properties of Fluorescent Nucleotide Substrates for DNA-dependent RNA Polymerases," <u>The Journal of Biological Chemistry</u> 254(23): 12069-12073 (1979) |
| | Wintermeyer, W. and Zachau, H. G., "Fluorescent Derivatives of Yeast tRNA ^{Phe} ," <u>Eur. Journal of Biochem</u> 98: 465-475 (1979) |
| | Reines, S. A. and Schulman, L. H., "A New Method for Attachment of Fluorescent Probes to tRNA," <u>Methods in Enzymology</u> 61: 146-157 (1979) |
| | Barrio, J. R., et al., "Synthesis of Modified Nucleoside 3', 5'-Bisphosphates and Their Incorporation into Oligoribonucleotides with T4 RNA Ligase," <u>Biochemistry</u> 17(11): 2077-2081 (1978) |
| | Koenig, P., et al., "Pyrene Derivatives as Fluorescent Probes of Conformation Near the 3' Termini of Polyribonucleotides," <u>Biopolymers</u> 16: 2231-2242 (1977) |
| | Menzel, H. M., "On the Phe-tRNA induced binding of fluorescent oligonucleotides to the ribosomal decoding site," <u>Nucleic Acids Research</u> 4(8): 2881-2892 (1977) |
| | Leonard, N. J. and Tolman, G. L., "Fluorescent Nucleosides and Nucleotides," <u>Annals of the New York Academy of Sciences</u> 255: 43-58 (1975) |
| as | Gavrilovskaya, I. N., et al., "Immunofluorescent Demonstration of Double-Stranded RNA and Virus Antigen in RNA Virus-Infected Cells," <u>Virology</u> 62: 276-279 (1974) |
| EXAMINER | DATE CONSIDERED |
| Alexander H. Smith | 9/30/02 |

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | |
|--|---------------------------------------|-----------------------|
| Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary) | Atty. Docket No. ENZ-5(D6)(C2) | Serial No. 08/479,997 |
| | Applicants: Dean L. Engelhardt et al. | |
| | Filed: June 7, 1995 | Group: 1656 |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPRO- PRIATE |
|---------------------|-----------------|------|------|-------|--------------|---------------------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS | TRAN- SLATION YES NO |
|-----------------|------|---------|-------|--------------|----------------------------|
| | | | | | |
| | | | | | |
| | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|--|--|
| | Kukhanova, M. K., et al., "Peptidyl-tRNA With A Fluorescent Label: Ribosome Substrates in Peptide Bond Formation," <u>Molecular Biology Reports</u> 1: 397-400 (1974) |
| | Lynch, D. C. and Schimmel, P. R., "Effects of Abnormal Base Ionizations on Mg ²⁺ Binding to Transfer Ribonucleic Acid as Studied by a Fluorescent Probe," <u>Biochemistry</u> 13(9): 1852-1861 (1974) |
| | Bergstrom, D. E. and Leonard N. J., "Structure of the Borohydride Reduction Product of Photolinked 4-Thiouracil and Cytosine. Fluorescent Probe of Transfer Ribonucleic Acid Tertiary Structure," <u>Journal of the American Chemical Society</u> 94(17): 6178-6182 (1972) |
| | Mundry, K. W. and Priess, H., "A Quantitative Technique for Mapping Oligonucleotides on Thin Layers of Cellulose," <u>Biochimica Et Biophysica ACTA</u> 269: 225-236 (1972) |
| | Munniger, K. O. and Chang, S. H., "A Fluorescent Nucleoside from Glutamic Acid tRNA of <i>Escherichia coli</i> K12," <u>Biochemical and Biophysical Research Communications</u> 46(5): 1837-1842 (1972) |
| | Erlanger, B. F., et al., "Nucleic Acid-Reactive Antibodies Specific for Nucleosides and Nucleotides," <u>Acta endocrinologica</u> 71: 206-221 (1972). |
| | Yoshikami, D. and Keller, E. B., "Chemical Modification of the Fluorescent Base in Phenylalanine Transfer Ribonucleic Acid," <u>Biochemistry</u> 10(15): 2969-2976 (1971) |
| | Rudkin G. T. and Siollar, B. D., "High Resolution Detection of DNA-RNA Hybrids <i>in situ</i> by Indirect Immunofluorescence," <u>Nature</u> 265: 472-473 (1977) |

EXAMINER

DATE CONSIDERED

9/30/02

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | |
|--|---------------------------------------|-----------------------|
| Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary) | Atty. Docket No. ENZ-5(D6)(C2) | Serial No. 08/479,997 |
| | Applicants: Dean L. Engelhardt et al. | |
| | Filed: June 7, 1995 | Group: 1656 |



U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPRO- PRIATE |
|---------------------|-----------------|------|------|-------|--------------|---------------------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS | TRAN- SLATION YES NO |
|-----------------|------|---------|-------|--------------|----------------------------|
| | | | | | |
| | | | | | |
| | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|---|---|
|  | Rozovskaya, T. A., et al., "Introduction of a Fluorescent Label at the 3' -OH End of DNA and the 3' -OH End of the Growing RNA Chain," <u>Molekulyama Biologiya</u> 11(3): 598-610 (1977) |
|  | Kossel, H. and Seliger, H., "Recent Advances in Polynucleotide Synthesis," <u>Progress in the Chemistry of Organic Natural Products</u> 32: 297-508 (1975) |
| | |
| | |
| | |
| | |
| | |
| | |
| EXAMINER | DATE CONSIDERED |

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.